



# Federal Aviation Administration

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## Memorandum

Date: February 01, 2006

To: All Regions  
Attn: Manager, Airports Division

From: Manager, Airport Engineering Division, AAS-100

Subject: Engineering Brief No. 71  
Modification to Standard for Aircraft Rescue and Fire Fighting Vehicles

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Advisory Circular (AC) 150/5220-10, Guide Specification for Water/Foam Aircraft Rescue and Firefighting Vehicles and AC 150/5220-19, Guide Specification for Small, Dual Agent Aircraft Rescue and Fire Fighting Vehicles are currently in the process of revision. The attachment describes the most current performance criteria attainable. These performance criteria are expected to be included in the new standard in the revisions of the above documents. The final revisions of the pertinent ACs could take several months. In the interim, due to the increased factor of public safety represented by these performance criteria, the Airport Engineering Division determines that requests for modifications to standards that include these criteria are considered acceptable.

Signed by

Rick Marinelli, P.E.  
Manager  
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Attachment

## **ENGINEERING BRIEF NO. 71**

### **MODIFICATION TO STANDARD FOR AIRCRAFT RESCUE AND FIRE FIGHTING VEHICLES**

FEBRUARY 01, 2006

**PURPOSE:** This Engineering Brief identifies the latest performance criteria attainable in the delivery of fire suppression agents.

**BACKGROUND:** Advisory Circular (AC) 150/5220-10, Guide Specification for Water/Foam Aircraft Rescue and Firefighting Vehicles and AC 150/5220-19, Guide Specification for Small, Dual Agent Aircraft Rescue and Fire Fighting Vehicles are currently in the process of revision. The following table describes the most current performance criteria attainable in the delivery of fire suppression agents. These performance criteria are expected to be included in the new standard in the revisions of the above documents.

**CONCLUSION:** The final revisions of the pertinent ACs could take several months. In the interim, due to the increased factor of public safety represented by these performance criteria, the Airport Engineering Division determines that requests for modifications to standards that include these criteria are considered acceptable.

<b>High Pressure Multi-Agent Delivery Technology/Nozzles</b>	<b>Vehicle Water Tank Capacity ≥60 to ≤528</b>	<b>Vehicle Water Tank Capacity ≥528 ≤1585</b>	<b>Vehicle Water Tank Capacity &gt;1585</b>
Dry Chemical handline	Where specified	Where specified	Where specified
Discharge Rate*	8 lbs/sec	8 lbs/sec	8 lbs./sec
Range (ft)**	≥90	≥90	≥90
Hose length	100-150 feet	100-150 feet	100-150 feet
Bumper Turret & extendable turret/boom	Where specified	Where specified	Where specified
Discharge Rate*	8 lbs/sec	8 lbs/sec	8 lbs./sec
Range **	≥90	≥90	≥90
Width	≥17 feet	≥17 feet	≥17 feet
Halogenated Agent Handline	Where specified	Where specified	Where specified
Discharge Rate			
independently	1 lb/sec	1 lb/sec	1 lb/sec
entrained in dry chemical stream	1/3 lb/sec	1/3 lb/sec	1/3 lb/sec
Range (ft)			
independently**	≥40 ft	≥40 ft	≥40 ft
entrained in dry chemical stream**	≥90 ft	≥90 ft	≥90 ft
Hose inside Diameter	≥1/4	≥1/4	≥1/4
Hose length	100-150 feet	100-150 feet	100-150 feet

\* Maximum discharge rate of DRY dry chemical powder (no entrainment)

\*\* Testing of DRY dry chemical powder not entrained in any other agent and tested under NO WIND conditions at an inclination of 10 degrees or less for the nozzle.

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